

REMARKS

Reconsideration of this application is respectfully requested in view of the foregoing amendment and the following remarks.

Applicants appreciate the acknowledgement of allowable subject matter in claims 6-8 and 11-13.

By the foregoing amendment, claims 1, 6-8 and 10-12 have been amended. Claims 1-14 are currently pending in the application and subject to examination.

Claims 1-5, 9, 10 and 14 Recite Patentable Subject Matter

In the Office Action mailed June 30, 2005 claims 1-5, 9, 10 and 14 were rejected under 35 U.S.C. § 102(e) as being anticipated by United States Patent Application Publication Number 2003-0131659 to Oka et al. (hereinafter, "Oka"). It is noted that claims 1 and 10 have been amended. To the extent that the rejection remains applicable to the claims currently pending, the Applicants hereby traverse the rejection, as follows.

Independent claim 1 recites, in part:

a temperature sensor installed at the radiator and detecting a temperature of the coolant flowing through at least one of the inlet pipe and outlet pipe...

and malfunction discriminating means for discriminating whether the cooling apparatus has malfunctioned based on change of the temperature of the coolant measured by said temperature sensor since the engine starting, when the operation of the engine is discriminated to be within the malfunction discrimination area. (Emphasis added).

Thus, in claim 1, discrimination of whether the cooling apparatus has malfunctioned is based on a change of coolant temperature as measured by the temperature sensor installed at the radiator.

In contrast, in the first and third embodiments of Oka, Oka discloses only one temperature sensor positioned at the engine, and no temperature sensor positioned at the radiator. See, Oka, p. 13, paragraph [0178]. In the second embodiment, Oka discloses a temperature sensor 20 positioned at the engine, and a temperature sensor 21 positioned at the radiator. However, in the second embodiment, Oka teaches determining whether the thermostat has malfunctioned by comparing the coolant temperature (or a rate of change of the coolant temperature) on the engine side with the coolant temperature (or a rate of change of the coolant temperature) on the radiator side.

Thus, Oka neither discloses or suggests a system for detecting malfunction of an engine cooling apparatus in which discriminating whether the cooling apparatus has malfunctioned is based on a change of temperature of a coolant measured by a temperature sensor installed at the radiator, as recited in claim 1.

For at least this reason, the Applicant submits that claim 1 is neither anticipated nor rendered obvious by Oka. Accordingly, the Applicant respectfully submits that independent claim 1 is patentably distinct over Oka and in condition for allowance.

Claims 2-5 and 9 depend from claim 1. Thus, claims 2-5 and 9 are allowable for at least the same reasons as claim 1, as well as for the additional subject matter recited therein. Accordingly, withdrawal of the rejection of claims 1-5 and 9 is respectfully requested.

Independent claim 10 recites, in part:

a temperature sensor installed at the radiator and detecting a temperature of the coolant flowing through at least one of the inlet pipe and outlet pipe...

temperature comparing means for comparing the temperature of the coolant measured by said temperature sensor with a reference value, when the measured period of time exceeds the predetermined value; and

malfunction discriminating means for discriminating that the cooling apparatus has malfunctioned, when the temperature of the coolant measured by said temperature sensor exceeds the reference value. (Emphasis added).

Thus, in claim 10, discrimination of whether the cooling apparatus has malfunctioned is based a coolant temperature as measured by the temperature sensor installed at the radiator compared to a reference value.

In contrast, in the first and third embodiments of Oka, Oka discloses only one temperature sensor positioned at the engine, and no temperature sensor positioned at the radiator. See, Oka, p. 13, paragraph [0178]. In the second embodiment, Oka discloses a temperature sensor 20 positioned at the engine, and a temperature sensor 21 positioned at the radiator. However, in the second embodiment, Oka teaches determining whether the thermostat has malfunctioned by comparing the coolant temperature (or a rate of change of the coolant temperature) on the engine side with the coolant temperature (or a rate of change of the coolant temperature) on the radiator side.

Thus, Oka neither discloses or suggests a system for detecting malfunction of an engine cooling apparatus in which discriminating whether the cooling apparatus has malfunctioned is based on the temperature of a coolant measured by a temperature sensor installed at the radiator and a reference value, as recited in claim 10.

For at least this reason, the Applicant submits that claim 10 is neither anticipated nor rendered obvious by Oka. Accordingly, the Applicant respectfully submits that independent claim 10 is patentably distinct over Oka and in condition for allowance.

As claim 10 is allowable, claim 14, which depends from claim 10, is allowable for at least the same reasons as claim 10, as well as for the additional subject matter recited therein. Accordingly, withdrawal of the rejection of claims 10 and 14 is respectfully requested.

Allowable Subject Matter

Claims 6-8 and 11-13 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 6-8, 11 and 12 have been rewritten to place them in independent form and include all the limitations of the base claim and any intervening claims. Accordingly, Applicants respectfully request allowance of claims 6-8, 11 and 12. Claim 13 depends from claim 12. Thus, claim 13 is also allowable.

The Applicants respectfully request withdrawal of the objection to claims 6-8 and 11-13.

Conclusion

For all of the above reasons, it is respectfully submitted that claims 1-14 are in condition for allowance and a Notice of Allowability is earnestly solicited.

Should the Examiner determine that any further action is necessary to place this application into better form, the Examiner is invited to contact the undersigned representative at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicants hereby petition for an appropriate extension of time. The fee for this extension may be charged to our Deposit Account No. 01-2300 referencing client matter number 107101-00055.

The Commissioner is hereby authorized to charge any fee deficiency or credit any overpayment associated with this communication to Deposit Account No. 01-2300 referencing client matter number 107101-00055.

Respectfully submitted,

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